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## Occupational Employment and Wages in Philadelphia-Camden-Wilmington – May 2016

Workers in the Philadelphia-Camden-Wilmington Metropolitan Statistical Area had an average (mean) hourly wage of \$25.70 in May 2016, 8 percent above the nationwide average of \$23.86, according to the U.S. Bureau of Labor Statistics. Sheila Watkins, the Bureau's regional commissioner, noted that, after testing for statistical significance, wages in the local area were significantly higher than their respective national averages in 12 of the 22 major occupational groups, including management; construction and extraction; and sales and related.

When compared to the nationwide distribution, local employment shares were significantly higher in 10 of the 22 occupational groups including office and administrative support; business and financial operations; and healthcare practitioners and technical. Conversely, 11 groups had employment shares significantly below their national representation; these groups included production; food preparation and serving related; and construction and extraction. (See [table A](#) and box note at end of release.)

**Table A. Occupational employment and wages by major occupational group, United States and Philadelphia-Camden-Wilmington Metropolitan Statistical Area, and measures of statistical significance, May 2016**

Major occupational group	Percent of total employment			Mean hourly wage			Percent difference (1)
	United States	Philadelphia-Camden-Wilmington		United States	Philadelphia-Camden-Wilmington		
Total, all occupations .....	100.0	100.0		\$23.86	\$25.70	*	8
Management .....	5.1	4.5	*	56.74	66.12	*	17
Business and financial operations .....	5.2	6.1	*	36.09	37.76	*	5
Computer and mathematical .....	3.0	3.4	*	42.25	42.85		1
Architecture and engineering .....	1.8	1.7	*	40.53	41.51	*	2
Life, physical, and social science .....	0.8	1.1	*	35.06	36.30		4
Community and social service .....	1.4	2.0	*	22.69	22.19		-2
Legal .....	0.8	1.1	*	50.95	52.71		3
Education, training, and library .....	6.2	6.8	*	26.21	27.85	*	6
Arts, design, entertainment, sports, and media .....	1.4	1.1	*	28.07	26.72	*	-5
Healthcare practitioners and technical .....	5.9	6.8	*	38.06	39.13	*	3
Healthcare support .....	2.9	3.6	*	14.65	14.66		0
Protective service .....	2.4	2.5		22.03	21.87		-1
Food preparation and serving related .....	9.2	8.1	*	11.47	11.57		1
Building and grounds cleaning and maintenance .....	3.2	2.9	*	13.47	14.37	*	7
Personal care and service .....	3.2	4.1	*	12.74	12.94		2
Sales and related .....	10.4	10.1	*	19.50	21.78	*	12
Office and administrative support .....	15.7	16.8	*	17.91	18.90	*	6
Farming, fishing, and forestry .....	0.3	0.1	*	13.37	14.57	*	9

Note: See footnotes at end of table.

**Table A. Occupational employment and wages by major occupational group, United States and Philadelphia-Camden-Wilmington Metropolitan Statistical Area, and measures of statistical significance, May 2016 - Continued**

Major occupational group	Percent of total employment			Mean hourly wage			
	United States	Philadelphia-Camden-Wilmington		United States	Philadelphia-Camden-Wilmington		Percent difference (1)
Construction and extraction.....	4.0	3.1	*	23.51	27.38	*	16
Installation, maintenance, and repair .....	3.9	3.5	*	22.45	24.24	*	8
Production .....	6.5	4.4	*	17.88	19.66	*	10
Transportation and material moving .....	6.9	6.5	*	17.34	17.40		0

Footnotes:

(1) A positive percent difference measures how much the mean wage in the Philadelphia-Camden-Wilmington Metropolitan Statistical Area is above the national mean wage, while a negative difference reflects a lower wage.

\* The percent share of employment or mean hourly wage for this area is significantly different from the national average of all areas at the 90-percent confidence level.

One occupational group—architecture and engineering—was chosen to illustrate the diversity of data available for any of the 22 major occupational categories. Philadelphia had 46,090 jobs in the architecture and engineering group, accounting for 1.7 percent of local area employment, below the 1.8-percent share nationally. The average hourly wage for this occupational group locally was \$41.51, 2 percent above the national average of \$40.53.

With employment of 5,600 mechanical engineers, was the largest detailed occupation within architecture and engineering, followed by civil engineers (5,430). Among the higher-paying jobs were chemical engineers with a mean hourly wage of \$54.03 and aerospace engineers with a wage of \$52.94. At the lower end of the wage scale were surveying and mapping technicians (\$22.19) and environmental engineering technicians (\$23.07). (Detailed occupational data for life, physical, and social science are presented in [table 1](#); for a complete listing of detailed occupations available go to [https://www.bls.gov/oes/current/oes\\_37980.htm](https://www.bls.gov/oes/current/oes_37980.htm).)

Location quotients allow us to explore the occupational make-up of a metropolitan area by comparing the composition of jobs in an area relative to the national average. (See [table 1](#).) For example, a location quotient of 2.0 indicates that an occupation accounts for twice the share of employment in the area as it does nationally. In the Philadelphia area, above-average concentrations of employment were found in several of the occupations within the architecture and engineering group. For instance, aerospace engineers were employed at 1.8 times the national rate in Philadelphia, and chemical engineers at 2.1 times the U.S. average. On the other hand, architectural and civil drafters had a location quotient of 1.0 in Philadelphia, indicating that this particular occupation's local and national employment shares were similar.

These statistics are from the Occupational Employment Statistics (OES) survey, a federal-state cooperative program between BLS and State Workforce Agencies, in this case, the Pennsylvania Department of Labor and Industry; the New Jersey Department of Labor and Workforce Development; the Delaware Department of Labor; and the Maryland Department of Labor, Licensing, and Regulation.

## **Note on Occupational Employment Statistics Data**

A value that is statistically different from another does not necessarily mean that the difference has economic or practical significance. Statistical significance is concerned with the ability to make confident statements about a universe based on a sample. It is entirely possible that a large difference between two values is not significantly different statistically, while a small difference is, since both the size and heterogeneity of the sample affect the relative error of the data being tested.

## **Technical Note**

The Occupational Employment Statistics (OES) survey is a semiannual mail survey measuring occupational employment and wage rates for wage and salary workers in nonfarm establishments in the United States. The OES program produces employment and wage estimates for over 800 occupations for all industries combined in the nation; the 50 states and the District of Columbia; 432 metropolitan areas and divisions; 167 nonmetropolitan areas; and Guam, Puerto Rico, and the U.S. Virgin Islands. National estimates are also available by industry for NAICS sectors, 3-, 4-, and selected 5- and 6-digit industries, and by ownership across all industries and for schools and hospitals. OES data are available at [www.bls.gov/oes/tables.htm](http://www.bls.gov/oes/tables.htm).

OES estimates are constructed from a sample of about 1.2 million establishments. Forms are mailed to approximately 200,000 sampled establishments in May and November each year. The May 2016 estimates are based on responses from six semiannual panels collected over a 3-year period: May 2016, November 2015, May 2015, November 2014, May 2014, and November 2013. The overall national response rate for the six panels, based on the 50 states and the District of Columbia, is 73 percent based on establishments and 69 percent based on weighted sampled employment. The unweighted employment of sampled establishments across all six semiannual panels represents approximately 58 percent of total national employment. The sample in the Philadelphia-Camden-Wilmington Metropolitan Statistical Area included 16,967 establishments with a response rate of 76 percent. For more information about OES concepts and methodology, go to [www.bls.gov/news.release/ocwage.tn.htm](http://www.bls.gov/news.release/ocwage.tn.htm).

The May 2016 OES estimates are based on the 2010 Standard Occupational Classification (SOC) system and the 2012 North American Industry Classification System (NAICS). Information about the 2010 SOC is available on the BLS website at [www.bls.gov/soc](http://www.bls.gov/soc) and information about the 2012 NAICS is available at [www.bls.gov/bls/naics.htm](http://www.bls.gov/bls/naics.htm).

## **Metropolitan area definitions**

The substate area data published in this release reflect the standards and definitions established by the U.S. Office of Management and Budget.

The **Philadelphia-Camden-Wilmington, Pa.-N.J.-Del.-Md. Metropolitan Statistical Area** includes Bucks, Chester, Delaware, Montgomery, and Philadelphia Counties in Pennsylvania; Burlington, Camden, Gloucester, and Salem Counties in New Jersey; New Castle County in Delaware; and Cecil County in Maryland.

## **Additional information**

OES data are available on our regional web page at <https://www.bls.gov/regions/mid-atlantic>. Answers to frequently asked questions about the OES data are available at [www.bls.gov/oes/oes\\_ques.htm](http://www.bls.gov/oes/oes_ques.htm). Detailed technical information about the OES survey is available in our Survey Methods and Reliability Statement on the BLS website at [www.bls.gov/oes/current/methods\\_statement.pdf](http://www.bls.gov/oes/current/methods_statement.pdf).

Information in this release will be made available to sensory impaired individuals upon request – Voice phone: (202) 691-5200; Federal Relay Service: (800) 877-8339.

**Table 1. Employment and wage data from the Occupational Employment Statistics survey, by occupation, Philadelphia-Camden-Wilmington Metropolitan Statistical Area, May 2016**

Occupation <sup>(1)</sup>	Employment <sup>(2)</sup>		Mean wage	
	Level	Location quotient <sup>(3)</sup>	Hourly	Annual <sup>(4)</sup>
Architecture and engineering occupations .....	46,090	0.9	\$41.51	\$86,330
Architects, except landscape and naval .....	2,500	1.3	37.68	78,380
Landscape architects .....	390	1.0	34.78	72,330
Cartographers and photogrammetrists.....	80	0.3	30.17	62,760
Surveyors .....	670	0.8	30.44	63,310
Aerospace engineers .....	2,490	1.8	52.94	110,120
Agricultural engineers.....	(5)	(5)	36.63	76,190
Biomedical engineers .....	400	1.0	40.13	83,470
Chemical engineers.....	1,320	2.1	54.03	112,380
Civil engineers.....	5,430	0.9	42.73	88,880
Computer hardware engineers.....	570	0.4	47.28	98,330
Electrical engineers .....	3,490	1.0	49.64	103,260
Electronics engineers, except computer .....	2,230	0.9	48.73	101,350
Environmental engineers.....	1,270	1.2	43.05	89,540
Health and safety engineers, except mining safety engineers and inspectors .....	500	1.0	46.25	96,200
Industrial engineers .....	4,150	0.8	45.74	95,130
Marine engineers and naval architects.....	60	0.4	44.04	91,600
Materials engineers .....	(5)	(5)	47.22	98,220
Mechanical engineers .....	5,600	1.0	45.63	94,910
Nuclear engineers .....	420	1.2	52.04	108,240
Petroleum engineers .....	140	0.2	63.09	131,230
Engineers, all other .....	2,490	1.0	48.08	100,000
Architectural and civil drafters .....	1,990	1.0	27.44	57,080
Electrical and electronics drafters .....	460	0.9	30.44	63,310
Mechanical drafters .....	1,210	1.0	30.16	62,730
Drafters, all other.....	120	0.4	26.12	54,330
Aerospace engineering and operations technicians ....	70	0.3	42.26	87,900
Civil engineering technicians.....	1,060	0.7	25.88	53,820
Electrical and electronics engineering technicians.....	1,910	0.7	28.65	59,590
Electro-mechanical technicians.....	90	0.3	24.72	51,420
Environmental engineering technicians.....	460	1.4	23.07	47,980
Industrial engineering technicians .....	890	0.7	31.23	64,960
Mechanical engineering technicians .....	900	1.0	25.13	52,270
Engineering technicians, except drafters, all other .....	1,740	1.2	32.27	67,120
Surveying and mapping technicians.....	510	0.5	22.19	46,160

Footnotes:

(1) For a complete listing of all detailed occupations in the Philadelphia-Camden-Wilmington Metropolitan Statistical Area, see [www.bls.gov/oes/current/oes\\_37980.htm](http://www.bls.gov/oes/current/oes_37980.htm)

(2) Estimates for detailed occupations do not sum to the totals because the totals include occupations not shown separately. Estimates do not include self-employed workers.

(3) The location quotient is the ratio of the area concentration of occupational employment to the national average concentration. A location quotient greater than one indicates the occupation has a higher share of employment than average, and a location quotient less than one indicates the occupation is less prevalent in the area than average.

(4) Annual wages have been calculated by multiplying the hourly mean wage by a "year-round, full-time" hours figure of 2,080 hours; for those occupations where there is not an hourly mean wage published, the annual wage has been directly calculated from the reported survey data.

(5) Estimates not available.